

Safety Data Sheet

According To Regulation (EC) No 1907/2006 (REACH)

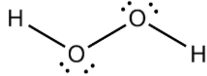
HYDROGEN PEROXIDE %35

Version: 2.1
Form No: 193440

Preparation Date : 9/2/2019
Revision Date: 9/2/2019

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name	HYDROGEN PEROXIDE %35
SDS¹ No	193440
CAS No	7722-84-1
EC No	231-765-0
Chemical Name	Hydrogen Peroxide
Molecular Formula	H ₂ O ₂
Structural Formula	
Description	Chemical compound

1.2 Relevant Identified Uses Of The Product And Uses Advised Against

Relevant Identified Uses	Bleaching of textiles, detergents and personal hygiene product composition, industrial sterilization applications, pulp and paper bleaching, food and metal industries in various applications.
Uses Advised Against	See chapter 16 for a general overview

1.3 Details Of The Supplier Of The Safety Data Sheet

Supplier (Manufacturer)	AK-KİM KİMYA SAN. VE TİC. A.Ş. www.akkim.com.tr
Address – Factory	Merkez Mahallesi, Ak-Kim Sokak, No:7 Taşköprü, Çiftlikköy / Türkiye
Telephone	0 226 815 33 00
Fax	0 226 353 25 39
Information Providing Authority About Safety Data Sheet	Ali Haydar KETİR ali.ketir@akkim.com.tr

1.4 Emergency Telephone Number

Company Emergency	+90 226 815 33 00
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2. HAZARDS IDENTIFICATION

2.1 Classification Of The Product

2.1.1 Classification According to Regulation (EC) No 1272/2008

- Acute toxicity, Category 4, oral; H302
- Serious eye damage, Category 1; H318
- Skin irritation, Category 2; H315
- Specific Target Organ Toxicity (single exposure), Category 3; H335

2.2 Label elements

2.2.1. Labeling According to Regulation (EC) No 1272/2008 [CLP²/GHS³]

Product Identifier
Hazard Component for Labeling
· Hydrogen Peroxide 35 %

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Hazard Pictograms



Signal Word

- Danger

Hazard Statements

- H302** Harmful if swallowed.
- H315** Causes skin irritation.
- H318** Causes serious eye damage.
- H335** May cause respiratory irritation.

Precautionary Statements

General

- None

Prevention

- P101** If medical advice is needed, have product container or label at hand.
- P280** Wear protective gloves / protective clothing / eye protection / face protection.
- P270** Do not eat, drink or smoke when using this product.

Response

- P301+P330+ P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310** Immediately call a POISON CENTER or doctor/physician.

Storage

- P405** Store locked up.

Disposal

- P501** Dispose of contents/container in accordance with local regulations.

Supplemental Hazard Information (EU) Statements

- None

2.2.2. Special Rules For Supplemental Label Elements For Certain Mixtures

- None

2.2.3. Additional Labeling

- Not Applicable

2.3 Hazard Identification

2.3.1. Skin Contact

Causes severe burns and damage to the skin when applied to human skin.

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2.3.2. Eye Contact

Causes severe eye damage.

2.3.3. Ingestion

Harmful if swallowed.

2.3.4. Inhalation

Harmful if inhaled. May cause respiratory irritation. Inflammatory changes of the respiratory tract, in extreme cases pulmonary damage due to higher vapour/aerosol concentrations.

2.3.5. Long term effects

Irritation of the mucous membranes (mainly of the eyes and the throat) and gradual bleaching of the hair; possibly changes of the skin.

2.3.6. Adverse Environmental Effects

Very toxic to aquatic organisms.

2.4. Additional Information

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

NAME	EINECS ⁴ NO	CAS ⁵ NO.	CONTENT (%)	CLASSIFICATION
				CLP
Hydrogen peroxide solution	231-765-0	7722-84-1	35	Ox. Liq. 1; H271 Acute Tox. 4, oral; H302 Skin corr. 1A; H314 Acute Tox. 4, inhalation; H332
Water	231-91-2	7732-18-5	65	This substance is not classified as hazardous according to regulation (EC) 1272/2008 [CLP/GHS].

3.1 Additional information

Specific Concentration limits:

- $C \geq 70\%$ Ox. Liq. 1; H271
- $50\% \leq C < 70\%$ Ox. Liq. 2; H272
- $C \geq 35\%$ STOT SE 3; H335
- $C \geq 70\%$ Skin Corr. 1A; H314
- $50\% \leq C < 70\%$ Skin Corr. 1B; H314
- $35\% \leq C < 50\%$ Skin Irrit. 2; H315
- $8\% \leq C < 50\%$ Eye Dam. 1; H318
- $5\% \leq C < 8\%$ Eye Irrit. 2; H319

4. FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 General information

- Remove contaminated clothing.

4.1.2 Following inhalation

- Whilst protecting yourself remove the casualty from the hazardous area and take him to the fresh air.

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- Lay the casualty down in a quiet place and protect him against hypothermia.
- As soon as possible repeatedly have the casualty deeply breath a glucocorticoid inhalation spray in.
- In the case of breathing difficulties have the casualty inhale oxygen.
- If the casualty is unconscious but breathing lay him in a stable manner on his side.
- If the casualty has stopped breathing give mouth to nose resuscitation. If this is not possible use mouth to mouth resuscitation. Keep his respiratory tract clear.
- Arrange medical treatment.

4.1.3 Following skin contact

- Remove contaminated clothing while protecting yourself.
- Rinse the affected skin areas for 10 minutes under running water.
- After contamination with concentrations > 10% in any case arrange medical treatment.
- Take off contaminated clothing and shoes immediately.
- Wash off with plenty of water.
- Keep warm and in a quiet place
- Call a doctor immediately.
- Take victim immediately to hospital.

4.1.4 Following eye contact

- Rinse the affected eye with widely spread lids for 15 minutes under running water whilst protecting the unimpaired eye.
- Arrange medical treatment.
- At concentrations > 10%: After rinsing of the eyes ensure immediate transportation of the casualty to an ophthalmologist/to hospital and, if possible, continue rinsing during transportation.
- Immediate medical attention is required.
- Take victim immediately to hospital.

4.1.5 Following ingestion

- By all means the casualty should drink plenty of liquid (water whenever possible).
- In contrast to some recommendations, vomiting should be avoided, if possible, and laxatives and activated charcoal should not be administered.
- Immediately summon an emergency physician to the scene of the accident.
- In case of spontaneous vomiting, position the casualty's head in a position deeper than the chest (highest risk of aspiration due to the formation of foam).
- If victim is conscious: - If swallowed, rinse mouth with water (only if the person is conscious).
- Call a physician immediately.
- Take victim immediately to hospital.

4.1.6 Self-protection of the first aider

- Protect skin and eyes.

4.1.7 Notes for the doctor

- Consider this SDS.
- Keep under medical observation if inhaled: pulmonary oedema may occur within 48 hours.
- Keep under medical observation in case of eye contact: eye damage effects may occur within a few days.
- The results of toxicity from W derivemainly from cases of ingestion.

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- *In these cases and in all other cases of exposure (eyes, skin, respiratory tract) the concentrations of the noxa (> 3% up to 90 vol. %) and the exposure times have a decisive impact on the extent of the (especially) topical lesions.*
- *Symptoms of acute poisoning:*
- *Eyes: From painful irritation up to severe chemical burns (conjunctival hyperaemia, conjunctivitis, oedema, blepharospasm, iritis, corneal turbidity, epithel defects, permanent damage of the cornea).*
- *Skin: Solutions as of approx. 10 %: Temporary bleaching (oxygen emphysema in the interstitial tissue, gas embolism in the blood capillaries), erythema, pain; as of a concentration of approx. 70%: chemical burns, comparable to third-degree burns; contamination of large areas might entail systemic oxygen embolism.*
- *Inhalation: Irritation of the mucosa, inflammatory tissue reactions, obstruction, glottic and pulmonary oedema, dyspnoea up to respiratory failure; extreme cases might involve systemic effects.*
- *Ingestion: Irritation up to corrosion of the contacted mucous membranes especially in the upper digestive tract, stomach distension, displacement of the upper respiratory tract due to the formation of foam, gastritis, duodenitis, colitis, acute visceral congestion, formation of vacuoles in the gastrointestinal submucosa, in the lymphatic channels, mesenteric lymph nodes or mucosa-associated lymphoid tissue as well as vacuolisation in other organs, systemic effects due to gas embolism.*
- *Systemic effects: Shock, acute coronary insufficiency, status epilepticus, cerebrovascular collapse, respiratory failure.*
- *The most frequent cause of death after ingestion of W solutions > 10% is the obstruction of the respiratory tract due to the formation of foam (-> mechanic asphyxia)]*
- *First medical assistance:*
- *Injuries of the eyes due to the contact with > 10% solutions should be followed up by an examination by an ophthalmologist as soon as possible after first medical assistance*
- *Because of a possible after-resorption, skin contaminations must be removed with particular care. Skin irritations or chemical burns should be treated with Flumethasone foam.*
- *The contamination of large skin areas with W (> 10%) requires a minimum follow-up observation period of several hours.*
- *Continue the pulmonary oedema prophylaxis after inhalation. In case of respiratory complaints, have the casualty sit upright and kept warm. Some cases might require oxygen supply over a breathing mask (35% oxygen, four litres per minute).The administration of oxygen in the inspired gas mixture must be restricted to max. 24% for patients suffering from chronic bronchitis.*
- *Oral intake of larger amounts of H₂O₂ involves the hazard of gas embolism, which requires immediate moving of the patient to a supine position (head in a deeper position than the pelvis).*
- *If the patient is not capable of coughing up or spitting out the foamy secretion, an extraction unit should be used.*
- *The cardiovascular functions must be monitored during the treatment (including ECG).*
- *Please check the possibility of an early intubation. Application of oxygen, cardiac massages, if required. A venous access established early facilitates necessary infusions or effective pain treatment prior to the arrival at the intensive care unit.*

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5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

- Use water, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Unsuitable extinguishing media

- None

5.3 Special hazards arising from the product

- The product is flammable.
- Heating can release hazardous gases.
- Gives off hydrogen by reaction with metals.
- Contact with water may produce heat release and presents risks of splashing.
- Substance has an oxidizing effect.
- H₂O₂-vapours may explode if the vapour phase reaches a concentration greater than 40 wt. % at normal pressure.
- Fire fighting equipment must be available.
- Inspect the electrical fittings regularly against the higher risk of corrosion

5.4 Advice for fire-fighters

- Wear self-contained breathing apparatus and protective suit.
- Fire fighters must wear fire resistant personnel protective equipment.
- Wear chemical resistant oversuit.
- Cool containers / tanks with water spray.
- Keep from any possible contact with contaminated water.
- Approach from upwind.
- Suppress (knock down) gases/vapours/mists with a water spray jet.
- After the fire, proceed rapidly with cleaning of surfaces exposed to the fumes in order to limit equipment damage.

5.5 Additional information

- Move containers from fire area if you can do so without risk.
- Alert Fire Brigade and tell them location and nature of hazard.
- Empty containers retain product residue (liquid and/or vapor) and can be dangerous.
- Water runoff can cause environmental damage .Dike and collect water used to fight fire. Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities.
- Containers can build up pressure if exposed to heat (fire).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- Prevent further leakage or spillage if safe to do so.
- Keep away from Incompatible products.
- Evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.
- Use personal protective equipment
- See section 8.

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6.2 Environmental precautions

- If the product contaminates rivers and lakes or drains inform respective authorities.
- Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

6.3.1 For containment

- Isolate hazarded area.
- Keep unnecessary and unprotected personnel from entering.
- Eliminate all ignition sources (no smoking,fares,sparks or flames in immediate area).
- Stop the flow material, if this is without risk.
- Dike the spilled material, where this is possible.
- Use water spray to reduce vapors or divert vapor cloud drift.
- Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local / national regulations.

6.3.2 For cleaning up

- Dam up.
- Do not mix waste streams during collection.
- Soak up with inert absorbent material.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Treat recovered material as described in the section "Disposal considerations".
- Never return spills in original containers for re-use.

6.3.3 Other information

- Dispose of waste material according to local, state and federal regulations.

6.4 Reference to other sections

- Dispose of contaminated material as waste in accordance with section 13.
- See Section 13.

7. HANDLING AND STORAGE

7.1.1 Precautions for safe handling

7.1.2 Protective measures

Personal preventions

- Do not get in eyes, on skin, or on clothing.
- Do not taste or swallow.
- Avoid breathing vapor or mist.
- Wash thoroughly after handling.
- Use only with adequate ventilation.
- Avoid contamination.
- Keep from contact with clothing and other combustible materials. Store in tightly closed container.
- Emptied container retains vapor and product residue.
- Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.
- DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.

Fire preventions

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- Do not handle store or open near an open flame, sources of heat or sources of ignition.
- Keep away from heat, sparks and open flame.

Environmental precautions:

- Ensure adequate ventilation.
- Dispose of waste material according to local, state and federal regulations.

7.1.3 Advice on general occupational hygiene

- Do not eat, drink, or smoke in areas where the material is used.
- Wash thoroughly after handling the material.
- Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

- Keep away from heat, sparks and flame.
- Keep container closed when not in use.
- Keep in a cool, well-ventilated place.
- Do not store outside in direct sunlight.
- Store in original containers.
- Store away from incompatible materials and foodstuff containers
- Protect containers against physical damage and check regularly for leaks.
- Protect material from direct sunlight.
- Observe manufacturer's storing and handling recommendations.
- Keep away from incompatible products.

7.1 Advice on common storage

- Keep away from food, drink and animal feeding stuffs.
- Store in original containers and keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

7.2 Specific precautions on storage

- No further details.
- Local regulations may require specific equipment for storage or use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Preventive industrial and medical examinations must be carried out according to the application area.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

8.1.1 Occupational exposure limits

Workplace Exposure Limits:

Occupational Exposure Limits:

- TLV/TWA : 1.4 mg/m³ (1 ppm)
- STEL : 2.8 mg/m³ (2 ppm)
- PEL : 1.4 mg/m³ (1 ppm)

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8.2 Exposure controls

- Adequate ventilation should be used during processing.
- If working with a powdered form or operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Assess the most likely route of exposure and minimize risk. Refer to section 4.2.8.1 of ISO/TR 13329 for more information.

8.2.1 Appropriate engineering controls:

- Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures.
- Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.
- Good general ventilation should be sufficient to control airborne levels.
- Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.
- Use explosion-proof ventilation equipment.
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

8.2.2 Personal protection equipment

8.2.2.1 Eye / Face protection:

- Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).



8.2.2.2 Skin protection

Hand protection

- Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.



Body protection

- Wear protective clothing, acid-proof.

Other protection

- Handle in accordance with good industrial hygiene and safety practice.
- Where splashing is possible, full chemically resistant protective clothing (e.g. acid suit) and boots are required.
- Wash hands before breaks and at the end of workday.
- Wash thoroughly after using product.
- Wash hands before eating or drinking.

8.2.2.3 Respiratory protection

- Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

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- If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2.3 Environmental exposure controls

- Legislation for the protection of the environment must be met in full.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form/Physical state	Clear, Liquid
Color	Colorless
Odor	Odourless
	Value
Molecular weight	34.02 (g/mol)
pH	≤3
Melting/Freezing point/range (°C)	-32
Initial boiling point/range (°C) 101,3 kPa	108
Flash Point (°C)	No data available
Oxidizing properties	Not applicable
Flammability (solid, gas)	No data available
Auto Ignition temperature (°C)	No data available
Oxidative Properties	Strong oxidizer
Viscosity cps (cSt)@25°C	No data available
Explosion limit upper, %by volume	Not Applicable
Explosion limit lower, %by volume	Not Applicable
Relative Density	1,13
Vapour Pressure	24
Partition coefficient n-Octanol/Water (log Pow)	No data available
Other safety information	
Surface tension (mN/m) @ 25°C	No data available
Solubility in water	100 %.

Note: The above features were determined according to prescribed methods at the Classification, Packaging and Labeling of Hazardous. Substances Regulation Section A-3 or a method comparable to the other.

10. STABILITY AND REACTIVITY

10.1 Reactivity

- No data available

10.2 Chemical stability

- Stable under normal conditions.

10.3 Possibility of hazardous reactions

- Can form unstable or explosive compounds with halogens, nitric acid, hypochlorites, silver, mercury, lead.
- Can react violently if in contact with strong acids, nitrogen oxides.

10.4 Conditions to avoid:

- Contamination
- To avoid thermal decomposition, do not overheat.

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10.5 Incompatible materials:

- Acids, Bases, Metals, Heavy metal salts, Powdered metal salts, Reducing agents, Organic materials,
- Flammable materials

10.6 Hazardous decomposition products:

- Oxygen

10.7 Hazardous polymerization:

- No data available.

11. TOXICOLOGICAL INFORMATION

11.1 General Information

- Exposure Routes: Inhalation and Oral.
- Target organ effects: Skin Corrosive and respiratory and eye irritant.

11.2 Acute toxicity

Acute oral toxicity

- LD50, rat, 1,193 - 1,270 mg/kg (H2O2 35 %)

Acute inhalation toxicity

- LC50, 4 h, rat, > 0.17 mg/l (H2O2 50 %), Remarks: vapour

Acute dermal toxicity

- LD50, rabbit, > 2,000 mg/kg (H2O2 35 %)

11.3 Skin corrosion/irritation and Eye damage/irritation:

Skin irritation:

- Rabbit, Skin irritation (H2O2 35 %)

Eye irritation

- Rabbit, Severe eye irritation (H2O2 10 %)

Irritation (other route)

- - Inhalation, Human experience, Irritating to respiratory system., 665 mg/m³, RD 50, (H2O2 50 %)

11.4 CMR effects (Carcinogenicity) :

This product is not considered to be a carcinogen by IARC⁶, ACGIH⁷, NTP⁸ or OSHA⁹.
Oral, Prolonged exposure, mouse, Target Organs: duodenum, carcinogenic effects
- Dermal, Prolonged exposure, mouse, Animal testing did not show any carcinogenic effects

11.5 CMR effects (Mutagenicity and Toxicity for reproduction) :

- No indication of mutagenicity when tested in vitro in the Bacterial Reverse Mutation Assay and in vivo using the Micronucleus Assay.
- Genetic toxicity in vitro
- In vitro tests have shown mutagenic effects.
- Genetic toxicity in vivo
- In vivo tests did not show mutagenic effects
- Substance is totally biotransformed (metabolised).
- Study scientifically unjustified

11.6 Other Toxicological Effects:

Allergic Effects	No data available.
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Effects on Repeated Doses Chronic Exposures	<p>Chronic toxicity</p> <ul style="list-style-type: none"> - Oral, 90-day, mouse, Target Organs: Gastrointestinal tract, Lowest observable effect level: 300 ppm, LOAEL - Oral, 90-day, mouse, NOEL: 100 ppm, NOAEL - Inhalation, 28-day, rat, Target Organs: Respiratory system, Lowest observable effect level: 10 ppm, LOAEL, vapour - Inhalation, 28-day, rat, NOEL: 2 ppm, NOAEL, vapour
Sensitization	Guineapig; Did not cause sensitization on laboratory animals.
Developmental Toxicity (Teratogenicity)	No data available
Fertility	No data available
11.7 STOT-single/repeated exposures:	
STOT-single exposure	No data available
STOT-repeated exposure	No data available.
11.8 Symptoms related to the physical, chemical and toxicological characteristics:	
In case of inhalation	Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough. - Risk of: Nose bleeding, chronic bronchitis.
In case of skin contact	Irritation - Risk of: Burn
In case of eye contact	Severe eye irritation - Risk of serious damage to eyes. - Symptoms: Redness, Lachrymation, Swelling of tissue
In case of ingestion	Severe irritation
11.9 Additional Toxicological Information:	
<ul style="list-style-type: none"> · Toxicological classifications are based on available knowledge and information. · The special effects to health are considered by taking into account the information in section 3. 	

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

Acute toxicity

- Fishes, *Pimephales promelas*, LC50, 96 h, 16.4 mg/l
- Fishes, *Pimephales promelas*, NOEC, 96 h, 4.3 mg/l
- Crustaceans, *Daphnia pulex*, EC50, 48 h, 2.4 mg/l

Remarks: fresh water, semi-static test

- Crustaceans, *Daphnia pulex*, NOEC, 48 h, 1 mg/l

Remarks: fresh water, semi-static test

Chronic toxicity

- Algae, *Skeletonema costatum*, EC50, growth rate, 72 h, 2.6 mg/l
- Algae, *Skeletonema costatum*, NOEC, 72 h, 0.63 mg/l
- Algae, *Chlorella vulgaris*, EC50, Growth rate, 72 h, 4.3 mg/l

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- Algae, *Chlorella vulgaris*, NOEC, 72 h, 0.1 mg/l

12.2 Photo degradation

No data available

12.3 Effects on Waste Water Treatment Plants

Product has inhibitory effects on the activities of micro-organisms, whether the information is not related, the likely impact on waste water treatment plants is unknown.

12.4 Mobility

Liquid.

Highly soluble in water, 100 %

Water threat class

No data available

Clean Water Impact

No data available

Known or predicted environmental distribution

No data available

12.5 Results of PBT and vPvB assessment

Biotic	
Ready biodegradability:	- aerobic, $t_{1/2} < 2$ min Conditions: biological treatment sludge Remarks: Readily biodegradable. - aerobic, $t_{1/2}$ from 0.3 - 5 d Conditions: fresh water Remarks: Readily biodegradable. - anaerobic Conditions: Soil/sediments Remarks: not applicable
Abiotic:	
Hydrolysis as a function of pH:	No data available
Photolysis:	No data available
Atmospheric oxidation:	- Air, indirect photo-oxidation, $t_{1/2}$ 24 h Conditions: sensitizer: OH radicals - Water, redox reaction, $t_{1/2}$ 120 h Conditions: mineral and enzymatic catalysis, fresh water, salt water - Soil, redox reaction, $t_{1/2}$ 12 h Conditions: mineral and enzymatic catalysis

Persistence and degradability:

Decomposition Potential of the products	No data available
The half-life of degradation	No data available
Potential degradation of product content in the evaluation of wastewater treatment plants	No data available

Bioaccumulation Potential :

Biological environment (biota) accumulation potential	Bioaccumulative potential: -1.57 Result: Does not bioaccumulate.
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Potential - nutrients pass through No data available

Reference Values - Log Kow , Sw and BCF No data available

12.6 Additional information

- $\log Pow@20^{\circ}C: 1.78 \times 10^{-12}$
- Harmful to aquatic life.
- Do not allow to be released into the environment
See the sections 6, 7, 13, 14 and 15.

13. DISPOSAL CONSIDERATIONS

13.1 Product / Packaging disposal

- Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.
- Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contact a licensed professional waste disposal service to dispose of this material.

13.2 Contaminated packaging

- Empty containers.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Where possible recycling is preferred to disposal or incineration.
- In accordance with local and national regulations.
- All residual material must be emptied and the containers recycled where possible. Where recycling is not possible, containers must be disposed of in accordance with Federal (country-specific), state, and local regulations.
- If questions exist about disposal, please contact the manufacturer for additional information.
- If there is product residue in the emptied container, follow directions for handling on the container's label.

13.3 Disposal Methods

- This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
- Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- If this product has been altered or contaminated with other hazardous materials, appropriate waste analysis may be necessary to determine proper method for disposal.

13.4 European Waste Catalogue

Safety Data Sheet

According To Regulation (EC) No 1907/2006 (REACH)

HYDROGEN PEROXIDE %35





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- According to the European Waste Catalogue, Waste Codes are not product specific but application specific. Waste Codes should be assigned by the User based on the application in which the product is used.
- Uncleaned packaging must be disposed of in accordance with official local regulations
- The final classification has to be done together with the local waste disposal company / authority.

14. TRANSPORT INFORMATION

UN 2014-HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)

	ADR ¹⁰ /RID ¹¹	ADNR ¹²	IMDG ¹³	ICAO ¹⁴ /IATA ¹⁵
TRANSPORTATION	Road	River	Marine	Airways
14.1 UN/ID No.	2014	2014	2014	2014
14.2 UN Proper Shipping Name	UN 2014- HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)			
Symbol				
14.3 Transport Hazard Class(es)	5.1	5.1	5.1	5.1
14.4 Packaging Group	II	II	II	II
Labelling No	5.1+8	5.1+8	5.1+8	5.1+8
Classification Code	OC1			
Hazard No(HIN No)	58			
EmS			F-H;S-Q	
14.5 Environmental Hazards MARINE Pollutant			NO	
14.6 Special Precautions for User	No data available			
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable			
Road Transport Notes: This product is not regulated as a hazardous material.				

15. REGULATORY INFORMATION

15.1 Safety, Health And Environmental Regulations / Legislation Specific For The Substance

Substance is found on the following regulatory lists;

- "European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)"

15.2 Chemical Safety Assessment

No data available

15.2.1 HAZARD

CLP classification according to Annex VI of CLP (Regulation (EC) No 1272/2008)

- Harmful if swallowed
- Causes skin irritation

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- Causes serious eye damage.
- May cause respiratory irritation

15.3 INTERNATIONAL REGULATIONS

- This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 and ISO 11014:2009. This product is classified according to EU Directive 67/548/EC and GHS/CLP.

16. OTHER INFORMATION

16.1 Other information

- For additional information regarding **AK-KIM KIMYA SAN. VE TIC. ŞTİ.** products please contact the **AK-KIM KIMYA SAN. VE TIC. A.S.**
- The above information complies with the 199/45/EC and 1907/2006 Directives and their amendments.
- In all cases of potential poisoning supportive therapy is of the utmost importance.

16.2 Related Person

- Prepared by: Selçuk BİLGİN (selcuk.bilgin@doruksistem.com.tr)
Uzman Akreditasyonu No: TSE GBF-A-0-2707 21.12.2017
- www.MsdsMarket.com ; info@doruksistem.com.tr ; 02163378383 (contact for further information if needed)

16.3 Revision Date, Version and SDS no

- Date : September 2, 2019
- Version : 2.1
- SDS No : 193440

16.4 Reason of re-issue

- Compiling according to Regulation (EC) No 1272/2008

16.5 Relevant H- and EUH-phrases (number and full text):

- | | |
|-------------|---|
| H271 | May cause fire or explosion; strong oxidiser. |
| H272 | May intensify fire; oxidiser. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |

16.6 Legal disclaimer

- The purpose of the above information is to describe the products only in terms of health and safety requirements.
- The information given should not, therefore, be construed as guaranteeing specific properties or as specification.
- Customers should satisfy themselves as to the suitability and completeness of such information for their own particular use.

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According To Regulation (EC) No 1907/2006 (REACH)

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- *The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.*
- *The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.*
- *The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Due to the many factors outside our control when using this product, we cannot accept liability for any injury, accident, loss or damage caused through its use.*

¹ SDS: Safety Data Sheet

² CLP: Classification Labelling and Packaging

³ GHS: Global Harmonised System

⁴ EINECS: European Inventory of Existing Commercial

⁵ CAS: Kimyasal maddelerin servis kayıt numarasi.

⁶ IARC- International Agency For Research On Cancer

⁷ ACGIH-American Governmental Conference of Industrial Hygienists

⁸ NTP-National Toxicology Program

⁹ OSHA-Occupational Safety and Health Administration

¹⁰ ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

¹¹ RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

¹² ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways

¹³ IMDG: International Maritime Code for Dangerous Goods

¹⁴ ICAO: International Civil Aviation Organization

¹⁵ IATA: International Air Transport Association

KONTROLÜ KOPYA